



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,688	10/29/2003	Roel Vandenhoeck	871-011564-US / 31020064	5066
2512 PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824	7590 03/09/2007		EXAMINER ETTEHADIEH, ASLAN	
			ART UNIT 2611	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/695,688

Applicant(s)

VANDENHOECK ET AL.

Examiner

Aslan Ettehadieh

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

2. Claim 1 is objected to because of the following informalities: please change "said system" to "said symbol rate processing system".
3. Claim 6 objected to because of the following informalities: please change "the spread-spectrum communications" to "the high-speed spread-spectrum communications".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 – 8 replete with a numerous 35 U.S.C. 112 second paragraph problems. A few examples are provided here:
5. Regarding claims 1 – 8, claims 1 – 8 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: no essential structural cooperative relationships for programmable registers, means for interleaving, means for error correction, means for rate matching, etc.
6. Regarding claim 1, claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being vague and indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is vague and indefinite because the claim discloses “a DSP-centric approach” which the parameters of a DSP-centric approach are not defined in the claim and thus the limitation of “a DSP-centric approach” is vague and indefinite. Further the limitation of “wherein said clock frequencies are significantly less than the frequencies needed in a DSP-centric approach” is vague and indefinite because the frequencies needed in a DSP-centric approach are not defined.

Art Unit: 2611

7. Regarding claim 1, claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being vague and indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is vague and indefinite because the claim is not clear to determine the preamble from the body of the claim, thus the examiner is interpreting the preamble to be after the portion of "said system comprises".

8. Regarding claim 1, claim 1 recites the limitation "wherein said clock frequencies". There is insufficient antecedent basis for this limitation in the claim. Does the applicant mean: "wherein clock frequencies", or "wherein said specific clock frequencies", or etc.

9. Regarding claim 1, claim 1 recites the limitation "less than the frequencies need in a DSP-centric approach". There is insufficient antecedent basis for this limitation in the claim.

10. Regarding claim 2, claim 2 recites the limitation "the clock frequencies". There is insufficient antecedent basis for this limitation in the claim.

11. Regarding claims 3, 5, and 6 are recites the limitation "the group". There is insufficient antecedent basis for this limitation in the claim.

12. Regarding claim 3 recites the limitation "the data rate". There is insufficient antecedent basis for this limitation in the claim. Does applicant mean: "a data rate", or "the specific data rate", or etc.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2611

13. Claims 1, 3 – 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bitterlich et al. (US 2002/0119803).

14. Regarding claim 1, Bitterlich discloses a symbol rate processing system for high-speed spread spectrum communications arranged for operation at a specific data rate, comprising programmable hardware blocks running at specific clock frequencies, characterised in that said system comprises programmable registers (paragraphs 6, 26, 30, 31, 41, 42, 117, 119, 122, 128, 141, 145, 146; where memory is also being interpreted as registers) and comprises means for interleaving, means for error correction and means for rate matching, (paragraphs 27, 30, 31) wherein said clock frequencies are significantly less than the frequencies needed in a DSP-centric approach (paragraphs 5, 116, 118; where a lower clock rate is being interpreted as clock frequencies are significantly less than the frequencies because clock rate is determined by frequency).

15. Regarding claim 3, Bitterlich further discloses the means for error correction comprises one or more elements of the group consisting of a convolutional encoder, a Viterbi decoder, a turbo encoder and a turbo decoder (paragraphs 27, 31).

16. Regarding claim 4, Bitterlich further discloses wherein the programmable registers are controlled by a microprocessor subsystem (paragraphs 5, 6, 122, 124, 131).

17. Regarding claim 5, Bitterlich further discloses wherein the microprocessor subsystem comprises one or more parameters selected from the group consisting of code block length, code rate for error codecs, number of code blocks to be processed,

Art Unit: 2611

number of fillers to be inserted, numbers of bits to be punctured or repeated, number of iterations in turbo decoding, length of CRC, polynomials for codecs and separate enables/resets for blocks (paragraphs 30, 31, 73, 115, 117, 139, 146).

18. Regarding claim 6, Bitterlich further discloses wherein the spread-spectrum communications are selected from the group consisting of IMT-2000, 3GPP, 3GPP2, W-CDMA, UMTS/FDD, UMTS/TDD, 1xEV-DO, 1xEV-DV, CDMA2000, IS95, IS95A, IS95B, UWB, TD-SCDMA, LAS-CDMA, IEEE802.11, IEEE802.11A, IEEE802.11B or IEEE802.16 communications (paragraphs 5, 27).

19. Regarding claim 7, Bitterlich further discloses an integrated circuit comprising the symbol rate processing system as in any of the claims 1 (paragraph 3).

20. Regarding claim 8, Bitterlich further discloses a transceiver for high-speed spread spectrum communications comprising the symbol rate processing system as in any of the claims 1 (paragraph 26).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bitterlich et al. (US 2002/0119803).

Art Unit: 2611

22. Regarding claim 2, Bitterlich does not disclose expressly wherein the clock frequencies for the means for interleaving, error correction and rate matching are less than 50 times the data rate.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use wherein the clock frequencies for the means for interleaving, error correction and rate matching are equal (less than 50 times) to the data rate in order to have correct total system clocking and thus providing synchronization throughout the system. Also, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to use wherein the clock frequencies for the means for interleaving, error correction and rate matching are less than 50 times to the data rate in order to saving processing and thus to either allocate processing to other components that need more accuracy or to plainly have a smaller processor.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aslan Ettehadieh whose telephone number is (571) 272-8729. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

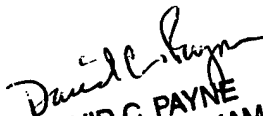
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aslan Ettehadieh
Examiner
Art Unit 2611

AE


DAVID C. PAYNE
PRIMARY PATENT EXAMINER